INCIDENCE AND PREVALENT OF SYSTEMIC SCLEROSIS IN THAILAND IN YEAR 2017-2020: A DATABASE FROM THE MINISTRY OF PUBLIC HEALTH

Keywords: Epidemiology, Systemic sclerosis

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Background: A better understanding of the epidemiological profile of systemic sclerosis (SSc) in Thais could improve care, human resource deployment, and public health budgeting.

Objectives: We aimed to determine the incidence and prevalence of SSc in Thailand between 2017 and 2020.

Methods: A descriptive epidemiological study was performed using the Information and Communication Technology Center, Ministry of Public Health database, comprising all types of healthcare providers during the study period. Demographic data of patients having a primary diagnosis of M34 systemic sclerosis and over 18 years of age were included. 2793 and 2077 were reviewed. The incidence and prevalence of SSc were calculated as well as their respective 95% confidence intervals (CIs).

Results: The number of SSc cases in 2017 was 15,920 from a total Thai population of 65,204,797. The prevalence of SSc in 2017 was 24.4 per 100,000 populations (95% CI 24.0-24.8). The prevalence of SSc among women was two times greater than among men (32.7 vs. 15.8 per 100,000). The incidence of SSc was stable from 2018 to 2019 but dropped slightly in 2020 (7.2, 7.6, and 6.8 per 100,000 person-years, respectively). Most SSc cases were in northeastern Thailand (11.6, 12.1, and 11.1 per 100,000 person-years from 2018-2020, respectively) and the peak was between 60-69 years of age (24.6, 23.8, and 20.9 per 100,000 person-years from 2018 to 2020, respectively).

Conclusion: SSc is a rare disease among Thais. The disease was commonly revealed in late middle-aged women with a peak at age 60-69 years, mainly from the Northeast regions. The incidence remained stable during the study period, albeit during the emergence of the coronavirus pandemic a slight decline was recorded.

REFERENCES:

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NAILFOLD CAPILLAROSCOPY FOR PREDICTION OF NOVEL SEVERE ORGAN INVOLVEMENT IN SYSTEMIC SCLEROSIS

Keywords: Organ damage, Prognostic factors, Systemic sclerosis

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Background: Nailfold capillaroscopy (NFC) has been suggested as a potential biomarker of disease severity in systemic sclerosis (SSc). Several studies report the association between capillary loss and disease severity however, the association of NFC abnormalities with novel severe organ involvement/progression in SSc has not been evaluated.

Objectives: We aim to evaluate the association of nailfold capillaroscopy (NFC) with novel major organ involvement/progression in SSc.

Methods: Follow-up data from patients with SSc registered between 2000 and 2022 were analysed. Patients underwent NFC at baseline. Novel severe organ involvement/progression was defined as new or progressive involvement of peripheral vasculature, lungs, heart, skin, gastrointestinal, kidney, musculoskeletal at 12 and 24 months of follow-up. The following NFC parameters were evaluated: capillary density, haemorrhages, enlarged and giant capillaries, avascular areas, organization of capillary architecture and scleroderma pattern (early/active/late). Logistic regression modelling was run to assess associations between NFC parameters and the occurrence of novel severe organ involvement and/or progression and risk factors.

Results: 113 patients with SSc were included, 70 patients (61%) developed novel overall severe organ involvement/progression: 39 patients (56%) during the first 12 months and 31 patients (44%) from 12 to 24 months of follow-up. 11% of patients developed novel peripheral vascular involvement, 21% developed novel intestinal involvement, 6% had novel pulmonary hypertension, 11% had skin progression, 10% had novel heart involvement, 10% had novel gastrointestinal involvement, 6% had scleroderma renal crisis and 13% had novel musculoskeletal involvement. Table 1 summarizes the significant associations between NFC and novel severe organ involvement/progression during follow-up. Loss of capillary density was associated with overall severe organ involvement (p 0.002), peripheral vascular involvement (p 0.03), new ILD (p 0.04) and skin progression (p 0.01); avascular areas were associated with overall severe organ involvement (p 0.03), new ILD (p 0.03) and progression of ILD (p 0.02) and scleroderma pattern was associated with overall severe organ involvement (p 0.03), peripheral vascular involvement (OR p 0.04), new ILD (p 0.004), progression of ILD (p 0.03) and skin progression (p 0.04).

Conclusion: NFC may be a potential biomarker in SSc for predicting novel severe organ involvement and/or progression. Abnormal capillary density, avascular areas and scleroderma pattern are predictors of overall severe organ involvement, peripheral vascular involvement, novel progression of ILD and skin progression.

REFERENCE:

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Disclosure of Interests: None Declared.

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Table 1. Associations between NFC and novel severe organ involvement/progression during follow-up

<table>
<thead>
<tr>
<th>Novel severe involvement or progression</th>
<th>Loss of capillary density</th>
<th>P value</th>
<th>Haemorrhages</th>
<th>P value</th>
<th>Enlarged capillaries</th>
<th>P value</th>
<th>Avascular areas</th>
<th>P value</th>
<th>Scleroderma pattern</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall novel organ involvement 3.21 (1.02-5.45)</td>
<td>0.002</td>
<td>1.82 (0.82-4.52)</td>
<td>0.82</td>
<td>1.09 (0.52-2.33)</td>
<td>0.72</td>
<td>2.1 (1.34-3.23)</td>
<td>0.03</td>
<td>1.82 (1.12-2.45)</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Peripheral vascular involvement 1.7 (1.3-2.3)</td>
<td>0.03</td>
<td>1.72 (0.82-3.72)</td>
<td>0.62</td>
<td>1.92 (0.64-2.3)</td>
<td>0.52</td>
<td>1.62 (0.72-2.3)</td>
<td>0.72</td>
<td>1.82 (1.12-2.45)</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>New ILD 2.45 (1.32-4.23)</td>
<td>0.04</td>
<td>1.2 (0.52-3.2)</td>
<td>0.75</td>
<td>1.32 (0.72-2.41)</td>
<td>0.82</td>
<td>1.82 (1.12-3.42)</td>
<td>0.03</td>
<td>1.98 (1.32-4.42)</td>
<td>0.004</td>
<td></td>
</tr>
<tr>
<td>Progression of ILD 0.98 (0.23-2.14)</td>
<td>0.32</td>
<td>0.45 (0.14-1.98)</td>
<td>0.45</td>
<td>0.78 (0.21-2.34)</td>
<td>0.72</td>
<td>1.32 (1.10-5.32)</td>
<td>0.02</td>
<td>1.45 (1.12-3.82)</td>
<td>0.03</td>
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<tr>
<td>New PPH 0.72 (0.14-1.98)</td>
<td>0.42</td>
<td>0.32 (0.15-1.67)</td>
<td>0.62</td>
<td>0.34 (0.21-1.52)</td>
<td>0.65</td>
<td>0.85 (0.62-2.14)</td>
<td>0.73</td>
<td>0.92 (0.52-1.45)</td>
<td>0.62</td>
<td></td>
</tr>
<tr>
<td>Skin progression 1.42 (1.12-2.39)</td>
<td>0.01</td>
<td>1.32 (0.62-2.81)</td>
<td>0.34</td>
<td>0.72 (0.32-1.30)</td>
<td>0.39</td>
<td>1.19 (0.63-3.62)</td>
<td>0.06</td>
<td>2.3 (1.45-3.14)</td>
<td>0.04</td>
<td></td>
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